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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,376	02/09/2004	Yoshitaka Sasaki	118317	6344

25944 7590 06/21/2006

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EXAMINER
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EVANS, JEFFERSON A

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 06/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/773,376	Applicant(s) SASAKI, YOSHITAKA	
	Examiner Jefferson A. Evans	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 7-9, 12, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 5, 6, 10, 11, 13 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

Claims 1 to 16 are pending.

***Specification***

1. The title of the invention is not adequately descriptive. A new title is required that is more clearly indicative of the invention to which the claims are directed by making reference to the cooling layer formed coplanar with the lower pole and from the same material as the lower pole.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 8, 9, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Sato (U.S. 6,963,470). Note cooling layer 15 which is coplanar with first pole layer 13 and formed from the same material as first pole layer 13 (column 7 – lines 32 and 33). Insulating layer 20 separates the cooling layer from the coil. Sato discloses a MR element 6 and shields 3,9 between a substrate 1 and the first pole layer 13.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 7, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato.

As per Claims 4 and 12: Sato discloses that the first pole layer 13 and the cooling layer 15 are separated from each other (column 7 – lines 5 and 56), it is unclear what material, if any, is present there between.

Official Notice is given that it was notoriously old and well known in the art to provide an insulating layer between two adjacent layers that one wants to keep separate.

Official notice is given that it was notoriously old and well known in the art to provide flattened top surface to layers in the same plane.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the space between the first pole and the cooling layer be filled with an insulating layer and to have the first pole layer, cooling layer, and in between insulating layer have flattened top surfaces. The motivation would have been: an insulating layer ensures the maintenance of the separation better than a void would, and as subsequent layers are formed on the first pole layer, cooling layer, and in between insulating layer, having the first pole layer, cooling layer, and in between insulating layer have flattened tops provides a better foundation upon which to form the subsequent layers.

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As per Claims 7 and 15: Sato does not appear to disclose the areas of the first pole layer and the cooling and accordingly Sato does not disclose that the area of the cooling layer is larger than that of the first pole layer.

Official Notice is given both that it was notoriously old and well known in the art to provide cooling structures with a large area and that it was notoriously old and well known in the art to have structures away from the air bearing surface have increased area to prevent a buildup of heat, i.e., provide better cooling.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the cooling layer have a larger area than that of the first pole layer. The motivation would have been: a larger area of a cooling structure provided increased ability to dissipate heat and away from the air bearing surface, where dimensions are dictated by the need for the small trackwidth, size limitations are relaxed and larger elements can be enlarged so as to prevent heat buildup.

***Allowable Subject Matter***

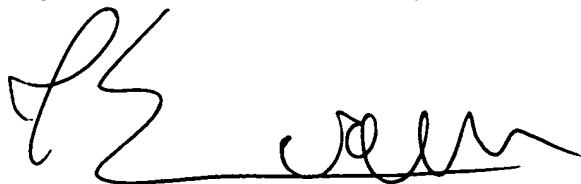
6. Claims 2, 3, 5, 6, 10, 11, 13, 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jefferson A. Evans whose telephone number is 571-272-7574. The examiner can normally be reached on Monday to Friday, 9:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'JA Evans', with a long horizontal line extending from the end of the signature.

JAE  
June 18, 2006

Jefferson A. Evans  
Primary Examiner  
Art Unit 2627

**JEFFERSON EVANS  
PRIMARY EXAMINER**